

## Warm Up # 2-3

## p. 191 # 4

- 4 Below are the durations, in minutes, of Paul and Redmond's last 25 mobile phone calls.

*Paul:* 1.7, 2.0, 3.9, 3.4, 0.9, 1.4, 2.5, 1.1, 5.1, 4.2, 1.5, 2.6, 0.8,  
4.0, 1.5, 1.0, 2.9, 3.2, 2.5, 0.8, 1.8, 3.1, 6.9, 2.3, 1.2

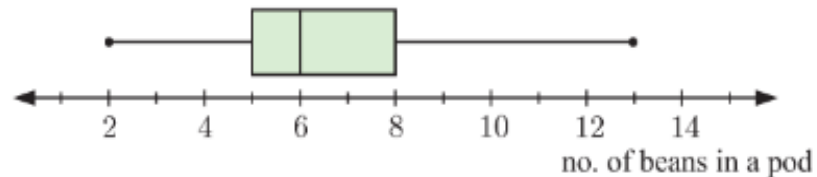
*Redmond:* 2.0, 4.8, 1.2, 7.5, 3.2, 5.7, 3.9, 0.2, 2.7, 6.8, 3.4, 5.2, 3.2,  
7.2, 1.7, 11.5, 4.0, 2.4, 3.7, 4.2, 10.7, 3.0, 2.0, 0.9, 5.7

- a Find the five-number summary for each of the data sets.
- b Display the data in a parallel boxplot.
- c Compare and comment on the distributions of the data.

check your answer:

- 4 a median = 6,  $Q_1 = 5$ ,  $Q_3 = 8$  b 3

c



## HW Questions:

## 6D p.169 #2) (by hand)

- 2 For the following data, state whether a frequency histogram or a column graph should be used, and draw the appropriate graph.

- a The number of matches in 30 match boxes:

Number of matches per box	47	49	50	51	52	53	55
Frequency	1	1	9	12	4	2	1

$[120, 130)$  means  
the same as  
 $120 \leq h < 130$ .



- b The heights of 25 hockey players (to the nearest cm):

Height (h cm)	$[120, 130)$	$[130, 140)$	$[140, 150)$	$[150, 160)$	$[160, 170)$
Frequency	1	2	7	14	1

## 6E.4 p.181 #5) (grapher)

- 5 The table shows the sizes of land blocks on a suburban street.  
Use technology to estimate the mean land block size.

Land size (m <sup>2</sup> )	Frequency
$[500, 600)$	5
$[600, 700)$	11
$[700, 800)$	23
$[800, 900)$	14
$[900, 1000)$	9

$L_1$   
 $mp$

550

650

750

850

950

1-Var Stat  $L_1, L_2$

$$\bar{x} = \frac{\sum (mp)(f)}{\sum f} \leftarrow \sum x$$

$$\sum f \leftarrow n$$

$$\bar{x} \approx \frac{47600}{62}$$

$$\bar{x} \approx 768$$

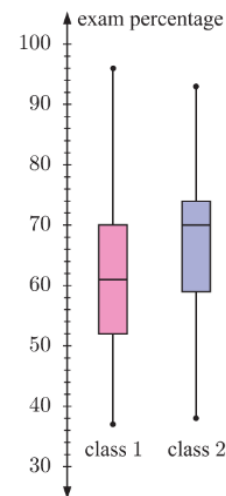
$L_2$

62

## 6G.2 p.190 #3)

**3** After the final examination, two classes studying the same subject compiled this parallel boxplot to show their results.

- a** In which class was:
- i** the highest mark
  - ii** the lowest mark
  - iii** there a larger spread of marks?
- b** Find the interquartile range of class 1.
- c** Find the range of class 2.
- d** If students who scored at least 70% received an achievement award, what percentage of students received an award in:
- i** class 1
  - ii** class 2?
- e** Describe the distribution of marks in:
- i** class 1
  - ii** class 2.
- f** Copy and complete:
- The students in class ..... generally scored higher marks.  
The marks in class ..... were more varied.



## Classwork week 2

## Use graph paper:

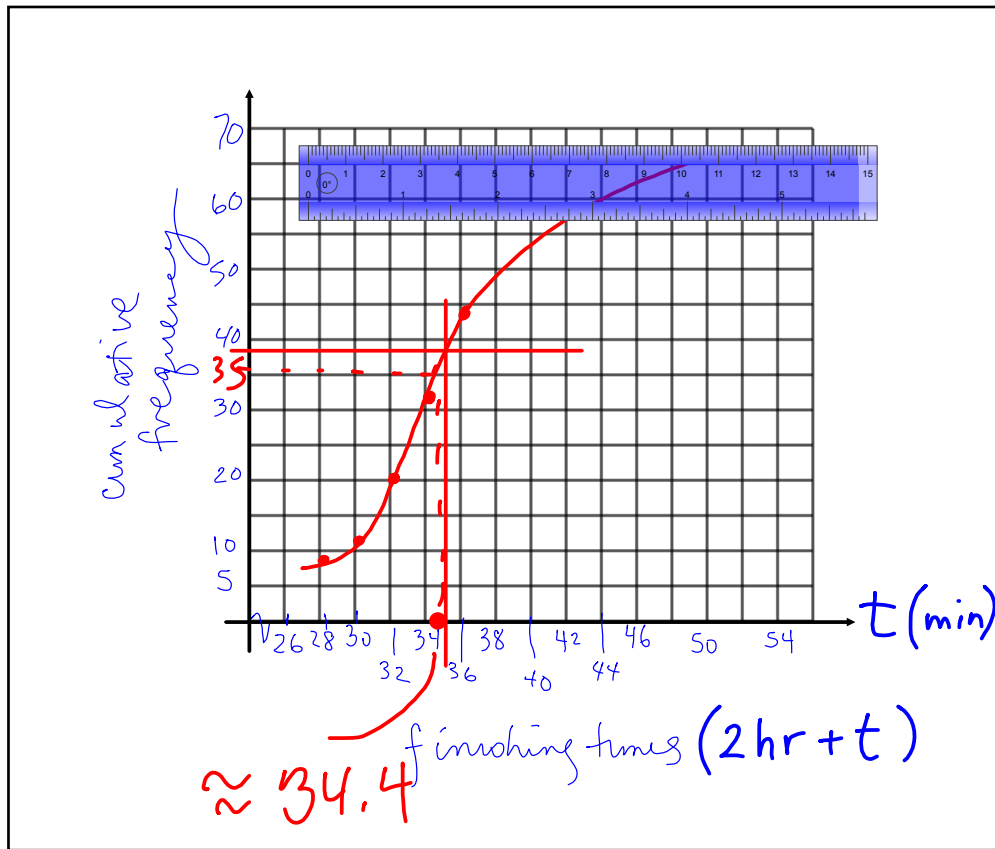
The data shows the results of the women's marathon at the 2008 Olympics, for all competitors who finished the race.

- a** Construct a cumulative frequency distribution table.
- b** Represent the data on a cumulative frequency graph.
- c** Use your graph to estimate the:
- i** median finishing time
  - ii** number of competitors who finished in less than 2 hours 35 minutes
  - iii** percentage of competitors who took more than 2 hours 39 minutes to finish
  - iv** time taken by a competitor who finished in the top 20% of runners completing the marathon.

Finishing time $t$	Frequency
$2 \text{ h } 26 \leq t < 2 \text{ h } 28$	8
$2 \text{ h } 28 \leq t < 2 \text{ h } 30$	3
$2 \text{ h } 30 \leq t < 2 \text{ h } 32$	9
$2 \text{ h } 32 \leq t < 2 \text{ h } 34$	11
$2 \text{ h } 34 \leq t < 2 \text{ h } 36$	12
$2 \text{ h } 36 \leq t < 2 \text{ h } 38$	7
$2 \text{ h } 38 \leq t < 2 \text{ h } 40$	5
$2 \text{ h } 40 \leq t < 2 \text{ h } 48$	8
$2 \text{ h } 48 \leq t < 2 \text{ h } 56$	6

Turn to page 195 and do # 1 & 4

(also on the graph paper)

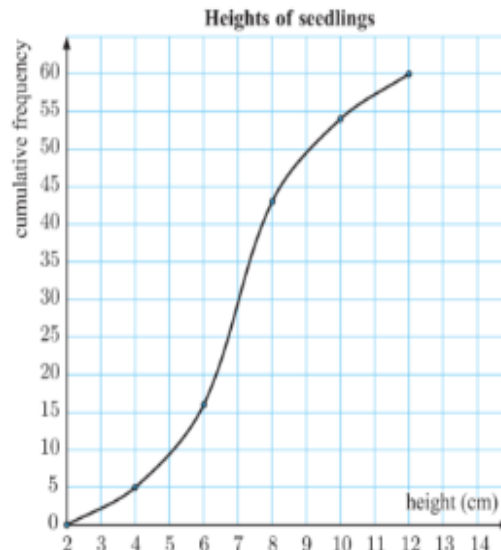


HW: 6H p.195, #2 & 5

and finish classwork, then read p. 197 about Standard Deviation for tomorrow.

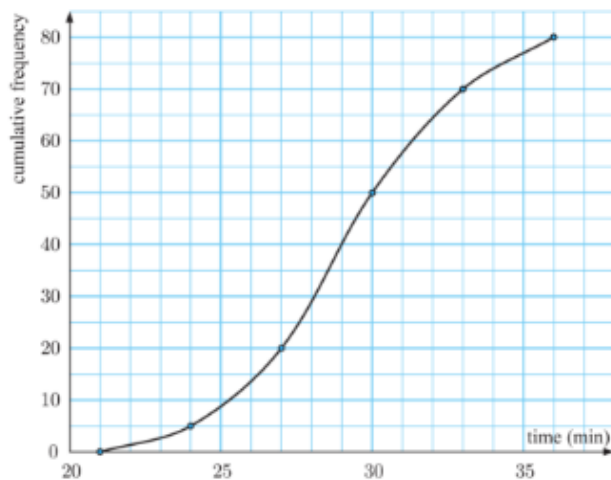
2 A botanist has measured the heights of 60 seedlings and has presented her findings on the cumulative frequency graph below.

- How many seedlings have heights of 5 cm or less?
- What percentage of seedlings are taller than 8 cm?
- Find the median height.
- Find the interquartile range for the heights.
- Copy and complete:  
"90% of the seedlings are shorter than ....."



- 5 The following cumulative frequency graph displays the performance of 80 competitors in a cross-country race.

**Cross-country race times**



Find:

- a the lower quartile time
- b the median
- c the upper quartile
- d the interquartile range
- e an estimate of the 40th percentile.